

HWg-Juno family



Installation manual

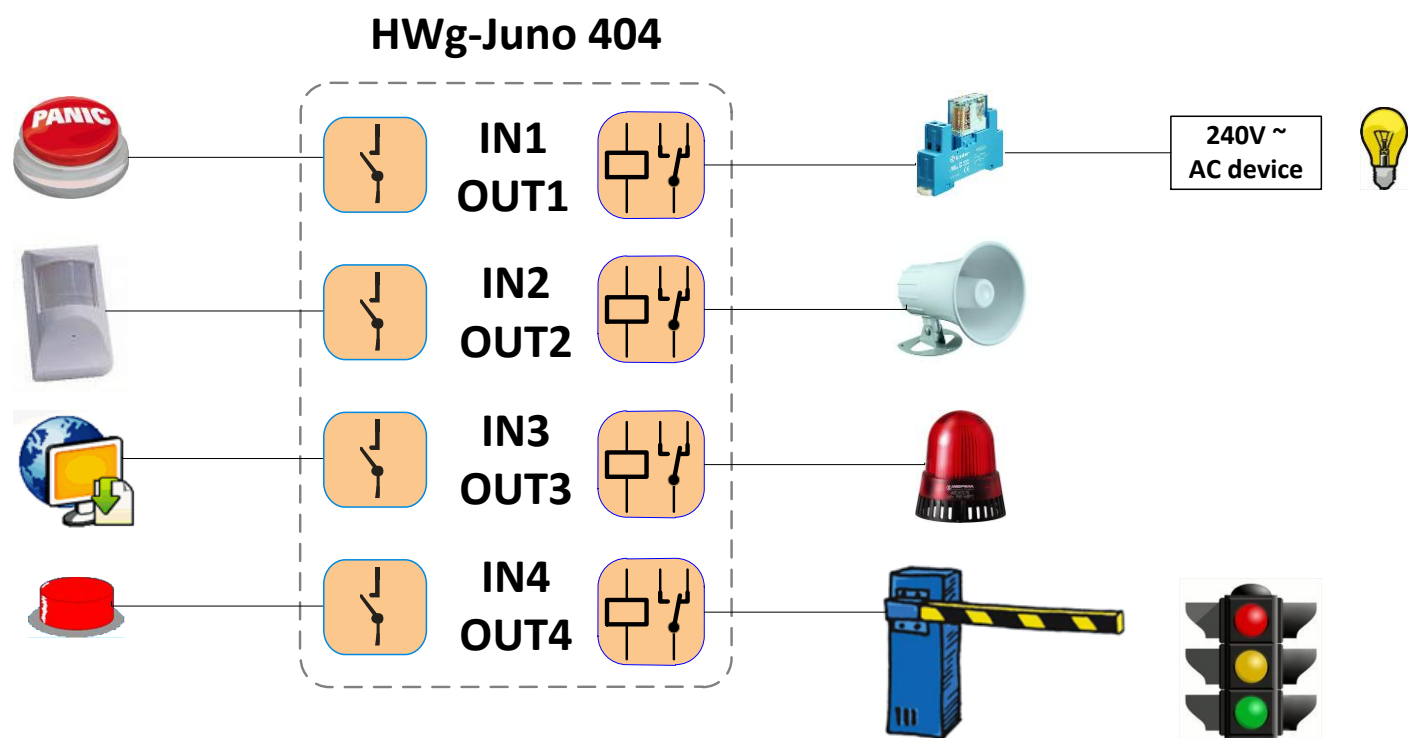
Manual version 2.0 - HWg-Juno firmware 1.0.8

General

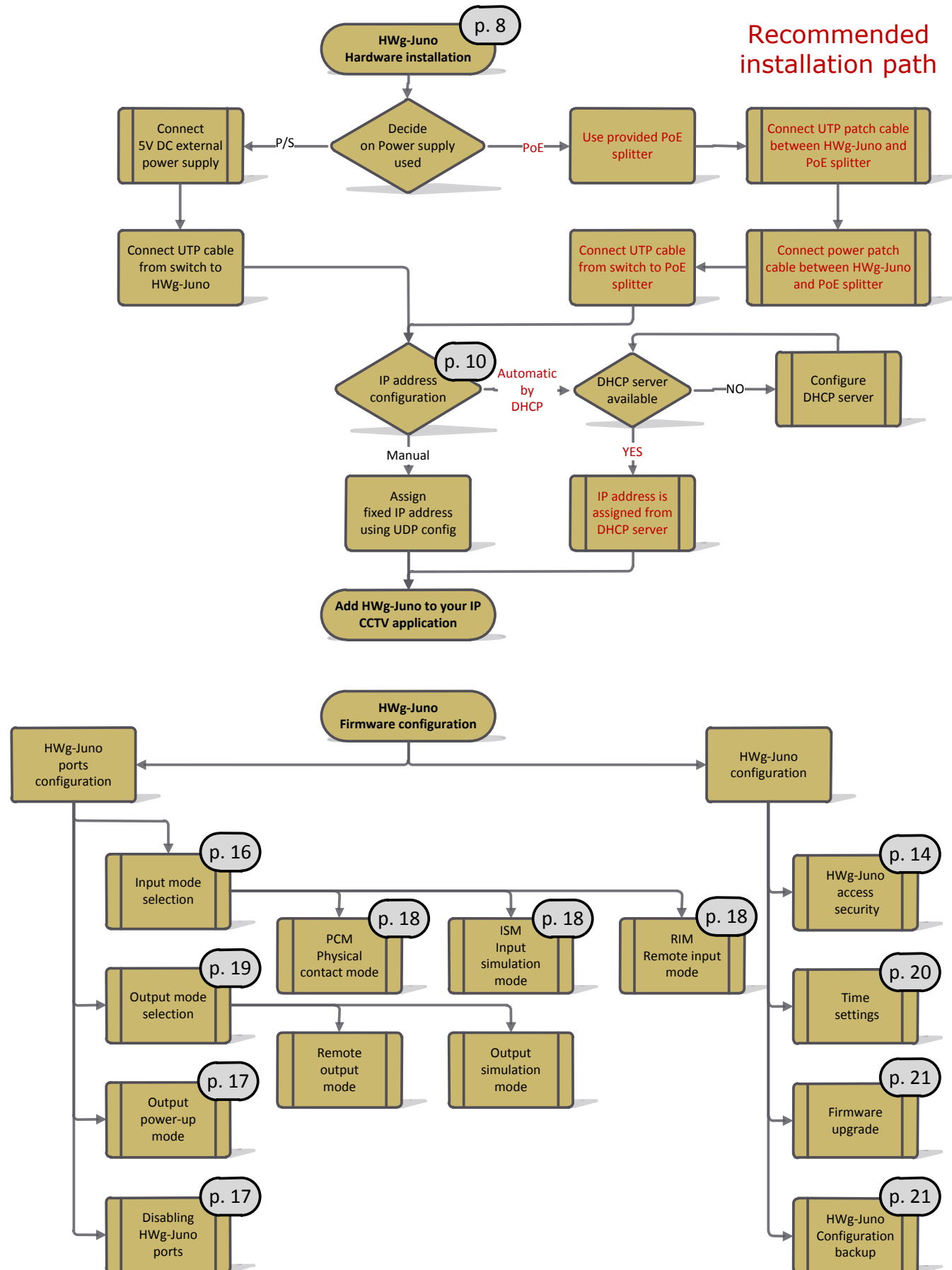
HWg-Juno is HWg-Juno is I/O device for IP CCTV integration. You can simply connect Digital Inputs & Relay outputs to your current central IP video management system. HWg-Juno allows system integrator to design system with unlimited number of dry inputs and relay outputs. HWg-Juno solves location, quantity and quality limitation of I/O ports available on video encoder or IP camera.

HWg-Juno is used for connection of the sensors and security systems to IP surveillance system.

Typical usage of HWg-Juno:



Quick navigation



IP address configuration

Before you add HWg-Juno to your IP video surveillance system you have to assign it IP address.

DHCP config

HWg-Juno **factory default** is to use **Dynamic IP address assignment from DHCP** server.

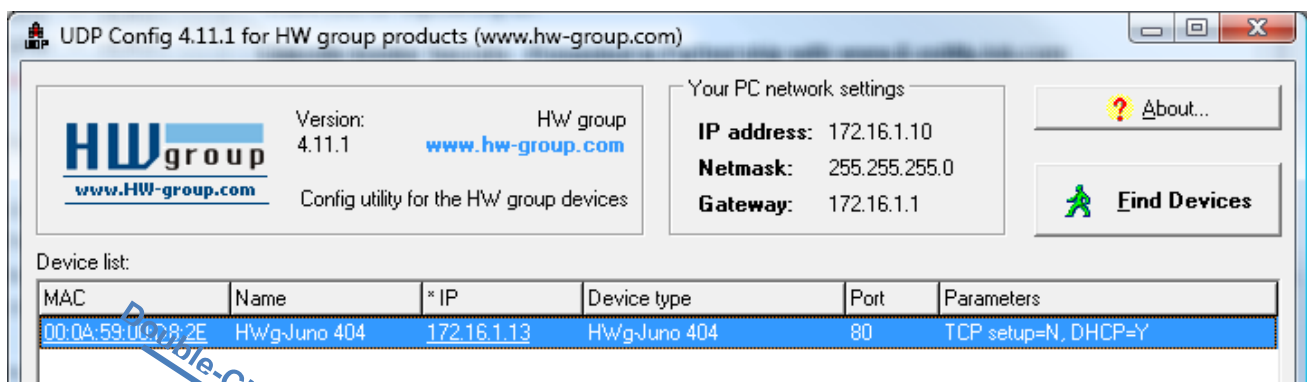
Recommended configuration method using DHCP server is to use static IP address configuration.

This will assure automatic assignment and management of IP addresses for all network units and removes the unnecessary step of static IP configuration of each unit.

UDP config

UDP Config utility – Is utility for discovery and IP configuration of all HW group hardware units. UDP config is available as installation package in root directory of the supplied CD (Windows and Linux versions).

Alternatively it could be downloaded from: www.HW-group.com > **Software** > **UDP Config**.



Click the icon to launch **UDP Config**. The program automatically looks for connected devices.

To search for devices, click the **Find Devices** icon.

The program looks for devices on your local network. Double-click a MAC address to open a basic device configuration dialog.

Configure network parameters

- IP address / HTTP port (80 by default)
- Network mask
- Gateway IP address for your network
- Device name (optional)

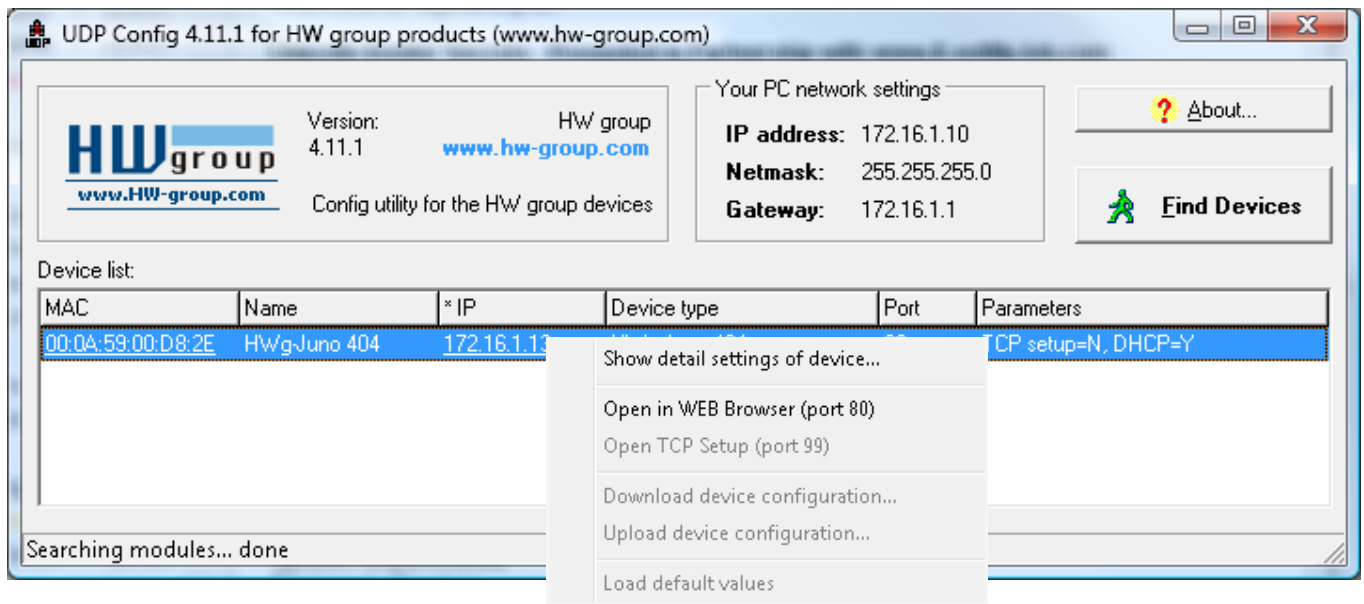
Click the **Apply Changes** button to save the settings.

You may also use IP CCTV Configuration tool to configure the IP address:

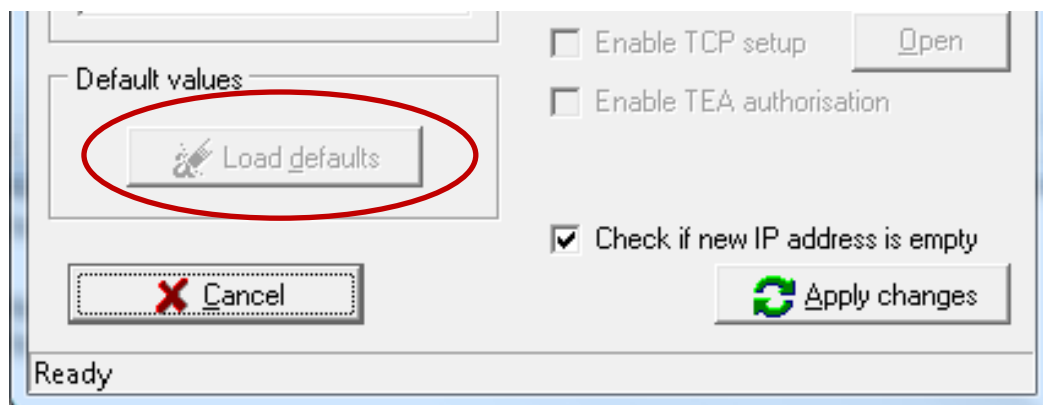


Restoring software factory defaults

UDP config could be used for restoring default settings:



- Reboot your unit
- Click "Find devices" in UDP config utility
- Open detail setting by double clicking on units entry.
- Click the button "Load defaults". This option is enabled only 30 seconds after unit reboot.
- Click "Apply changes" button to restore factory defaults settings.

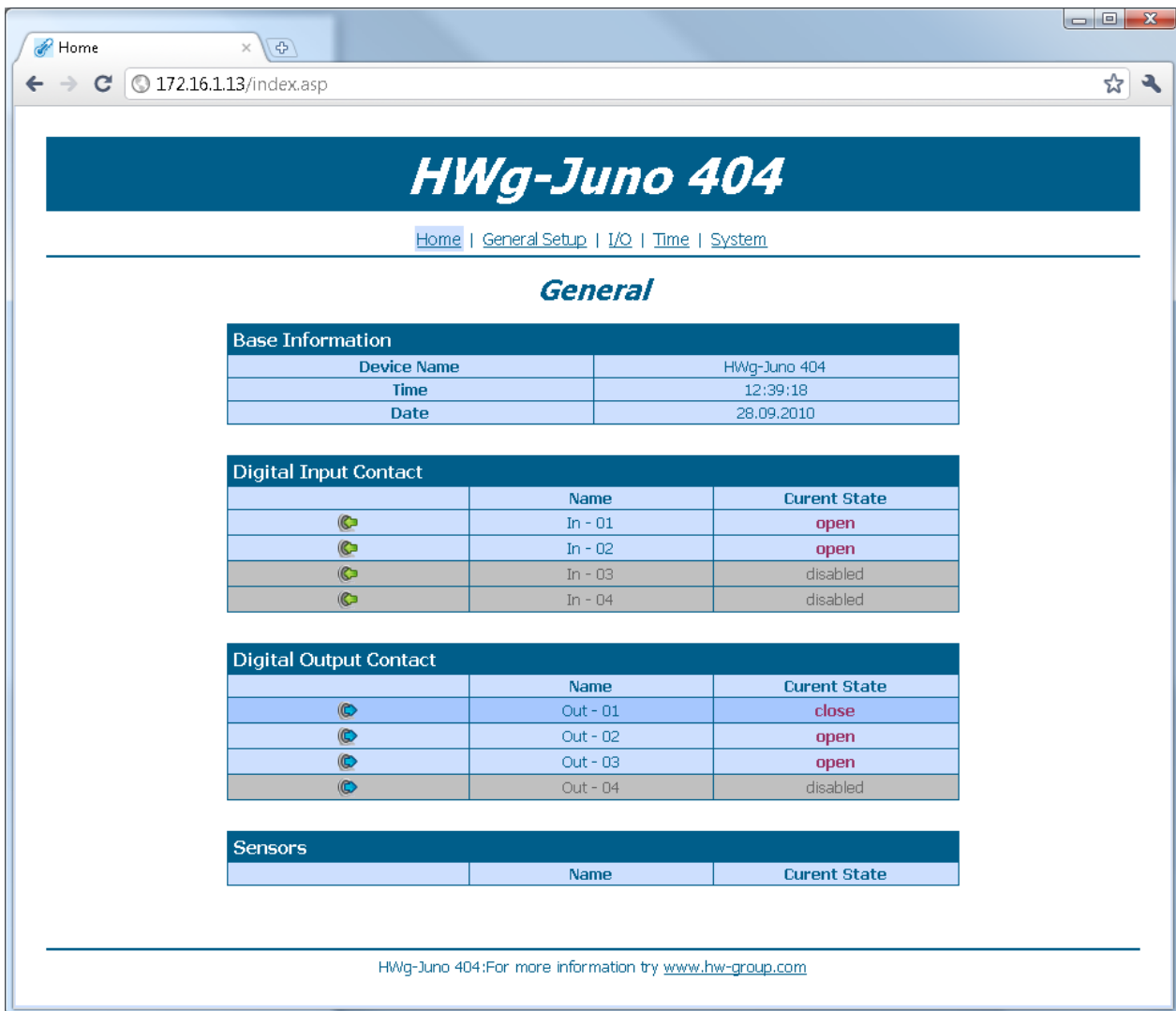


HWg-Juno configuration

HWg-Juno - Home

HWg-Juno Home page displays unit status and show real-time status of inputs and outputs. Home page is automatically updated so port status is live.

Home page displays currently active and disabled ports.











HWg-Juno 404

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General

Base Information	
Device Name	HWg-Juno 404
Time	12:39:18
Date	28.09.2010

Digital Input Contact		
	Name	Current State
	In - 01	open
	In - 02	open
	In - 03	disabled
	In - 04	disabled

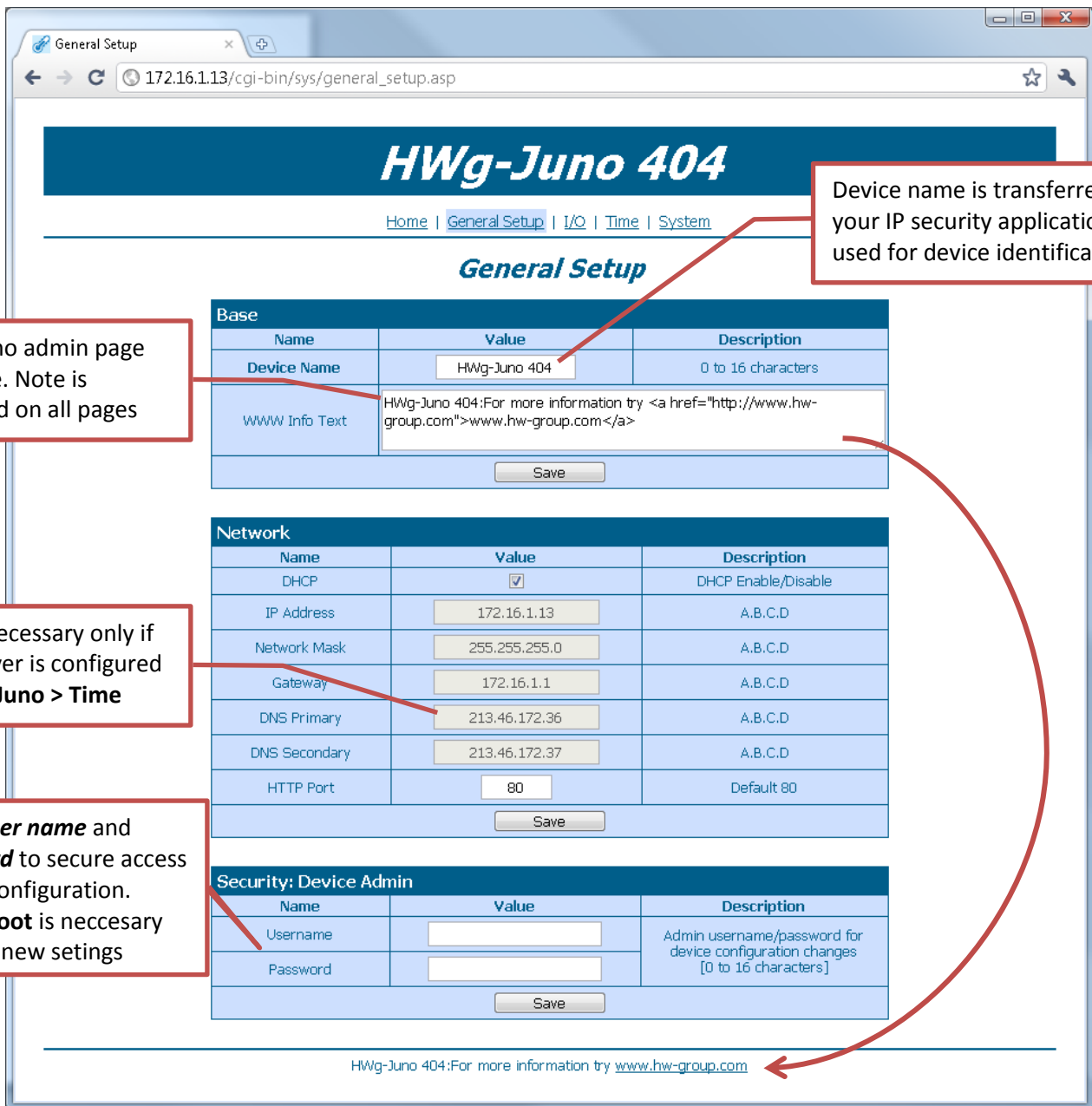
Digital Output Contact		
	Name	Current State
	Out - 01	close
	Out - 02	open
	Out - 03	open
	Out - 04	disabled

Sensors	
Name	Current State

HWg-Juno 404: For more information try www.hw-group.com

Sensor section is reserved for future use.

General setup



The screenshot shows the 'General Setup' page for the HWg-Juno 404 device. The browser address bar shows '172.16.1.13/cgi-bin/sys/general_setup.asp'. The page has a navigation bar with links: Home | General Setup | I/O | Time | System. The main title is 'HWg-Juno 404'.

Base

Name	Value	Description
Device Name	HWg-Juno 404	0 to 16 characters
WWW Info Text	HWg-Juno 404:For more information try www.hw-group.com	

Save

Network

Name	Value	Description
DHCP	<input checked="" type="checkbox"/>	DHCP Enable/Disable
IP Address	172.16.1.13	A.B.C.D
Network Mask	255.255.255.0	A.B.C.D
Gateway	172.16.1.1	A.B.C.D
DNS Primary	213.46.172.36	A.B.C.D
DNS Secondary	213.46.172.37	A.B.C.D
HTTP Port	80	Default 80

Save

Security: Device Admin

Name	Value	Description
Username		Admin username/password for device configuration changes [0 to 16 characters]
Password		

Save

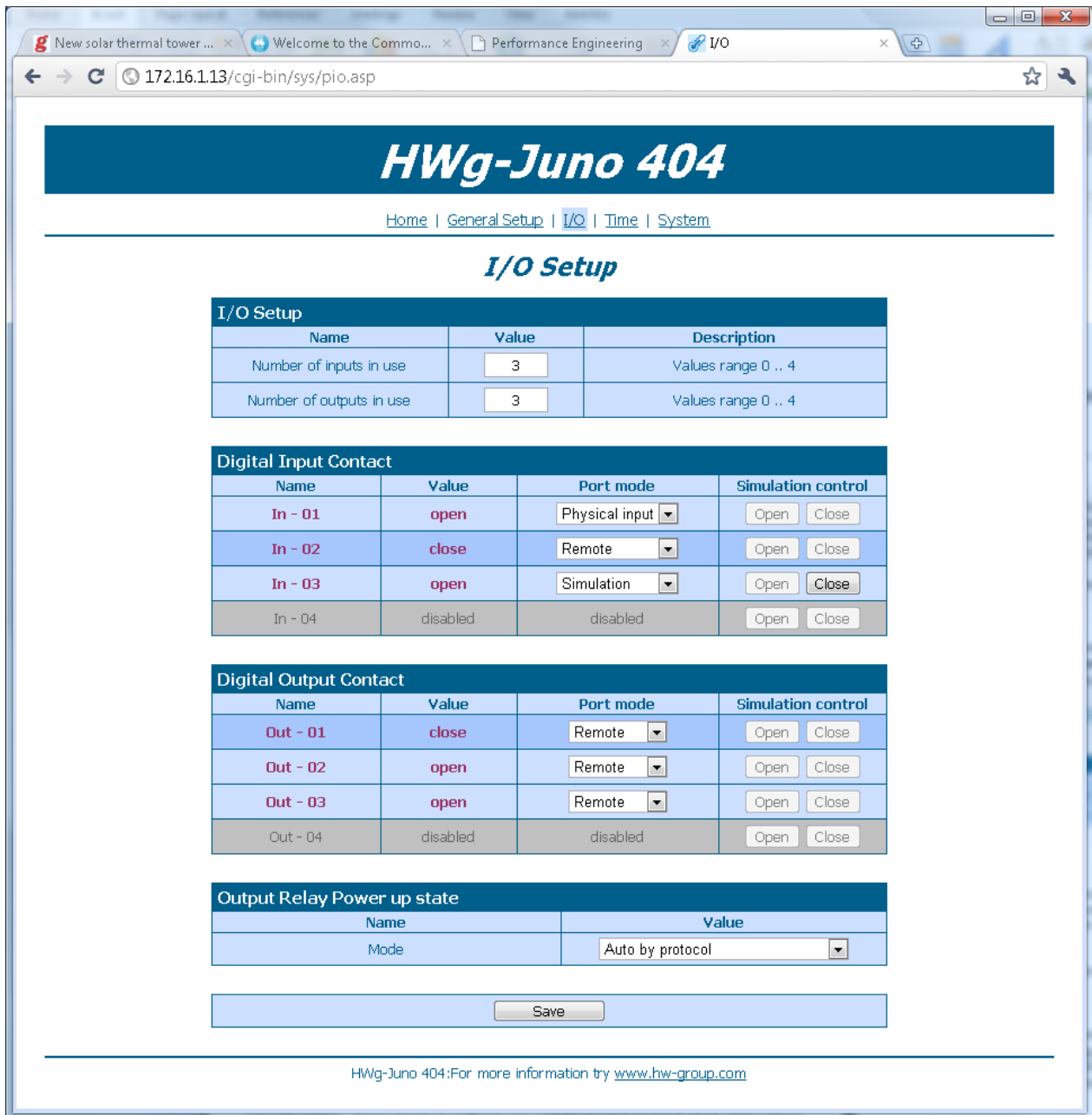
At the bottom, there is a link: HWg-Juno 404:For more information try www.hw-group.com

Annotations:

- A red box points to the 'Device Name' field with the text: 'Device name is transferred to your IP security application and is used for device identification.'
- A red box points to the 'WWW Info Text' field with the text: 'HWg-Juno admin page footnote. Note is displayed on all pages'
- A red box points to the 'DNS Primary' field with the text: 'DNS is necessary only if FTP server is configured in HWg-Juno > Time'
- A red box points to the 'Username' and 'Password' fields with the text: 'Enter **User name** and **password** to secure access to unit configuration. Unit **reboot** is necessary to apply new settings'

If unit access security is used then user name and password has to be used when adding HWg-Juno unit into your IP CCTV application.

I/O configuration



HWg-Juno 404

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I/O Setup

I/O Setup		
Name	Value	Description
Number of inputs in use	<input type="text" value="3"/>	Values range 0 .. 4
Number of outputs in use	<input type="text" value="3"/>	Values range 0 .. 4

Digital Input Contact			
Name	Value	Port mode	Simulation control
In - 01	open	Physical input	<input type="button" value="Open"/> <input type="button" value="Close"/>
In - 02	close	Remote	<input type="button" value="Open"/> <input type="button" value="Close"/>
In - 03	open	Simulation	<input type="button" value="Open"/> <input type="button" value="Close"/>
In - 04	disabled	disabled	<input type="button" value="Open"/> <input type="button" value="Close"/>

Digital Output Contact			
Name	Value	Port mode	Simulation control
Out - 01	close	Remote	<input type="button" value="Open"/> <input type="button" value="Close"/>
Out - 02	open	Remote	<input type="button" value="Open"/> <input type="button" value="Close"/>
Out - 03	open	Remote	<input type="button" value="Open"/> <input type="button" value="Close"/>
Out - 04	disabled	disabled	<input type="button" value="Open"/> <input type="button" value="Close"/>

Output Relay Power up state	
Name	Value
Mode	Auto by protocol

HWg-Juno 404: For more information try www.hw-group.com

HWg-Juno inputs and outputs tab supports port configuration.

HWg-Juno Input ports supports 3 port input port modes

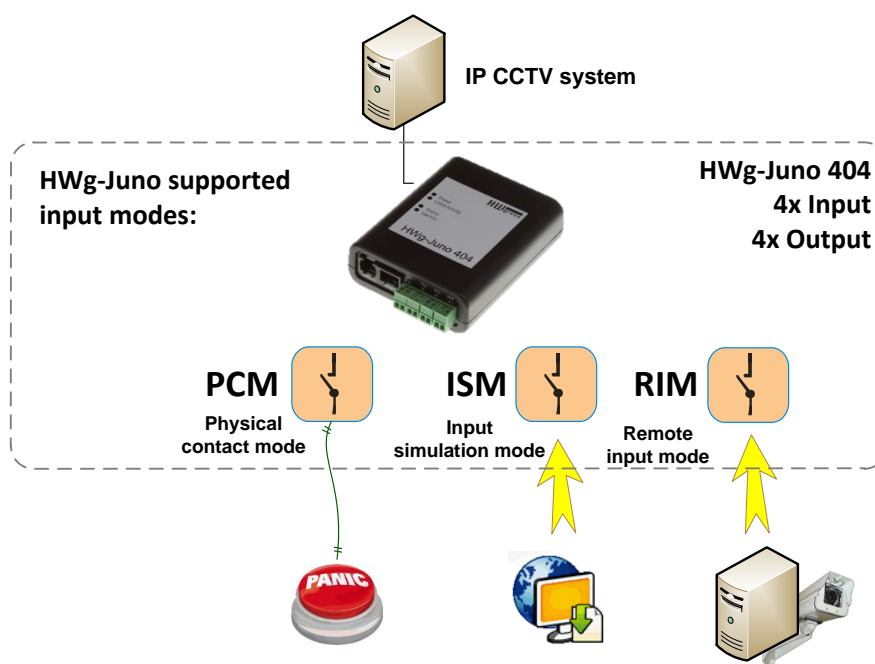
- *Remote – API*
- *Simulation*
- *Physical contact.*

Default input mode is Physical contact mode - PCM.

HWg-Juno outputs support two port modes:

- *Remote*
- *Simulation.*

Default output mode is Remote with OSM – Output state memory.



HWg-Juno input modes

Physical contact mode – PCM is basic input mode. It supports logic levels **High** and **Low**.

Input simulation mode – ISM is feature for testing Genetec integration with dry contacts and balanced inputs. When you switch port into simulation mode you are able to get remote control over the input state from web browser. Control buttons on HWg-Juno web interface are used to control tested inputs. Feature is used mostly for integration and site acceptance testing. ISM is also basis of scenario based simulation systems used for performance testing of security operators.

Remote input mode – RIM is HWg-Juno feature which allow using HWg-Juno as event gateway for any IP surveillance systems. This simple to use feature allow third-party system to send events into processing in IP surveillance management system. HWg-Juno inputs could be configured for remote input mode – RIM on port by port basis. HWg-Juno support mix or remote and physical port on unit.

Disabling HWg-Juno ports

HWg-Juno supports disabling unused input and outputs ports. This feature is useful for application with license model based on connected ports (like cameras, inputs, outputs). Genetec Omnicast and Genetec Security Center is example of application with such license policy. To save cost of SW licenses you could disable unused ports in **HWg-Juno > I/O** admin menu.

If you want to disable 2 input ports you have to disable ports IN3 and IN4. Ports could be disabled only the last not used.

To disable units ports:

- Select number of ports you want to keep on the unit. Inputs and outputs dedicated.
- Click **Save** to apply new settings.
- Disabled inputs are listed and status of port is *Disabled*.

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I/O Setup

I/O Setup		
Name	Value	Description
Number of inputs in use	<input type="text" value="2"/>	Values range 0 .. 4
Number of outputs in use	<input type="text" value="3"/>	Values range 0 .. 4

Output Relay Power-up state

Relay output power-up mode is selected automatically by protocol used.

If you connect to HWg-Juno using Genetec protocol then OSM – Output state memory mode will be used. If you connect to HWg-Juno using PSIA protocol then NO/NC power-up status configured by PSIA will be used.

OSM mode is used for reducing the delay created from application to HWg-Juno communication.

To configure relay power-up mode:

- Go to **HWg-Juno > I/O > Output Relay Power up state**
- Select desired port mode. Auto by protocol is defaults settings.
- Optionally you could engage OSM mode by selection Last state before power down.
- Optionally you could engage PSIA protocol defined power up mode by selecting State by PSIA protocol parameter.

Output Relay Power up state	
Name	Value
Mode	<div> <input type="text" value="Auto by protocol"/> </div> <div> Auto by protocol Last state before power down State by PSIA protocol parameter </div>
<div>Save</div>	

Input ports configuration

Physical input mode – PCM mode has to be enabled on port by port basis in I/O tab of HWg-Juno admin interface. PCM is inputs specific feature. **PCM mode is default.**

To configure **Physical mode** for selected port:

- Open the admin interface of HWg-Juno unit
- Go to **HWg-Juno > I/O** tab of admin interface
- Go to **input port** selected port and from Port mode drop down menu select Physical input
- You have to **Save** the new settings to apply new configuration.

Digital Input Contact			
Name	Value	Port mode	Simulation control
In - 01	open	Physical input ▼	Open Close
In - 02	close	Remote ▼	Open Close
In - 03	open	Simulation ▼	Open Close
In - 04	disabled	disabled	Open Close

Remote input mode – RIM mode has to be enabled on port by port basis in I/O tab of HWg-Juno admin interface. RIM is inputs specific feature.

To configure **Remote mode** for selected port:

- Open the admin interface of HWg-Juno unit
- Go to **HWg-Juno > I/O** tab of admin interface
- Go to **input port** selected port and from Port mode drop down menu select Remote
- You have to **Save** the new settings to apply new configuration.

Input simulation mode – ISM mode has to be enabled on port by port basis in I/O tab of HWg-Juno admin interface. ISM could be used for all inputs and outputs.

To configure **Simulation mode** for selected port:

- Open the admin interface of HWg-Juno unit
- Go to **HWg-Juno > I/O** tab of admin interface
- Select the input port for testing.
- From Port mode drop down menu select Simulation
- You have to **Save** the new settings to apply new configuration.
- Once new setting is applied **Simulation buttons** become available for testing.

Output ports configuration for Remote and Simulation mode

Relay outputs could be configured to two modes:

- **Remote** – control of relay output ports is done using from software using Genetec or PSIA protocol. Remote mode is **Defaults** settings
- **Simulation** – is used for manual output port control. This mode is used for testing and troubleshooting.

Digital Output Contact			
Name	Value	Port mode	Simulation control
Out - 01	close	Remote ▾	Open Close
Out - 02	open	Simulation ▾	Open Close
Out - 03	open	Remote ▾	Open Close
Out - 04	disabled	disabled	Open Close

To configure **Remote mode** for selected port:

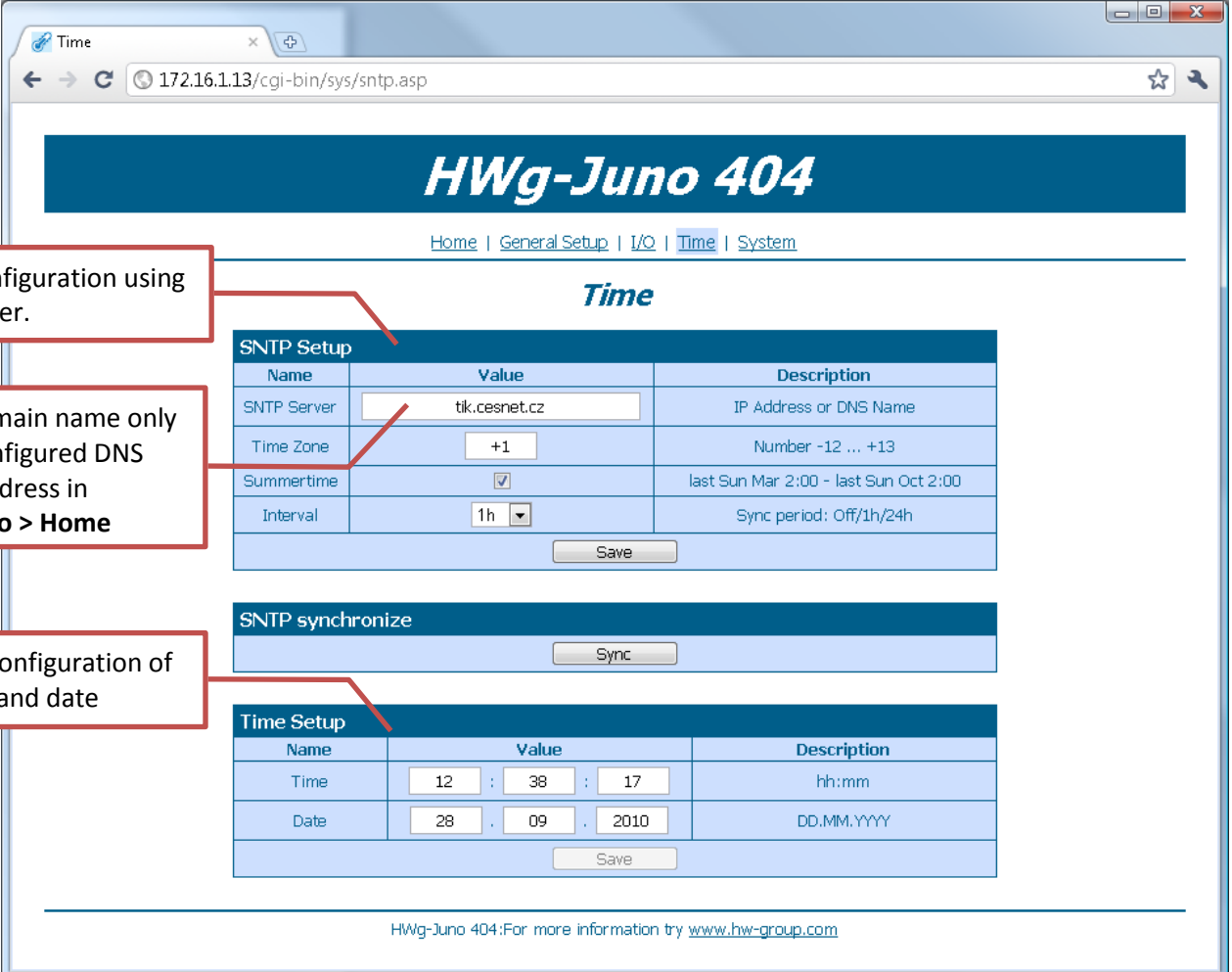
- Open the admin interface of HWg-Juno unit
- Go to **HWg-Juno > I/O tab** of admin interface
- Select the output port for testing.
- From Port mode drop down menu select Remote
- You have to **Save** the new settings to apply new configuration.

To configure **Simulation mode** for selected port:

- Open the admin interface of HWg-Juno unit
- Go to **HWg-Juno > I/O tab** of admin interface
- Select the output port for testing.
- From Port mode drop down menu select Simulation
- You have to **Save** the new settings to apply new configuration.
- Once new setting is applied **Simulation buttons** become available for testing.

Time

Time configuration is optional for future use. Genetec protocol did not use internal unit clock.



HWg-Juno 404

Home | General Setup | I/O | **Time** | System

Time

Time configuration using NTP server.

Enter domain name only if you configured DNS server address in **HWg-Juno > Home**

Manual configuration of the time and date

SNTP Setup		
Name	Value	Description
SNTP Server	tik.cesnet.cz	IP Address or DNS Name
Time Zone	+1	Number -12 ... +13
Summertime	<input checked="" type="checkbox"/>	last Sun Mar 2:00 - last Sun Oct 2:00
Interval	1h	Sync period: Off/1h/24h

Save

SNTP synchronize

Sync

Time Setup		
Name	Value	Description
Time	12 : 38 : 17	hh:mm
Date	28 . 09 . 2010	DD.MM.YYYY

Save

HWg-Juno 404: For more information try www.hw-group.com

System

The screenshot shows the 'System' configuration page for the HWg-Juno 404. The browser address bar shows '172.16.1.13/cgi-bin/sys/system.asp'. The page title is 'HWg-Juno 404'. The navigation menu includes 'Home', 'General Setup', 'I/O', 'Time', and 'System'. The main content area is titled 'System' and contains several sections:

- Download:** A table with two rows: 'Backup configuration' (File: [HWg_Juno_Config.bin](#)) and 'Online values in XML' (File: [values.xml](#)). A callout points to the 'File' column header.
- System:** A table with two columns: 'Name' and 'Value'. It lists: Version (1.0.8), Compile time (Oct 05 2010, 10:14:11), Build (1278), UpTime (2:37), and Upload Firmware or Configuration. Below this table are buttons: 'Vybrat soubor', 'Soubor nevybrán', and 'Upload'. A callout points to the 'Upload' button.
- Device Identify:** A section with an 'Identify' button. A callout points to this button.
- Factory Default:** A section with a 'Default' button. A callout points to this button.
- System Restart:** A section with a 'Reboot' button. A callout points to this button.

At the bottom, there is a footer: 'HWg-Juno 404: For more information try www.hw-group.com'.

Download unit's configuration backup

Upload unit's configuration backup or unit's firmware file.

LED identification LED is illuminated after pressing the button.

Restore factory defaults

Unit reboot

Appendix A:

RIM API

The remote control input – RIM has simple WEB based API. To control the HWg-Juno input port you have to set port into remote mode.

State of the input is controlled by sending HTTP command to device:

Single port control:

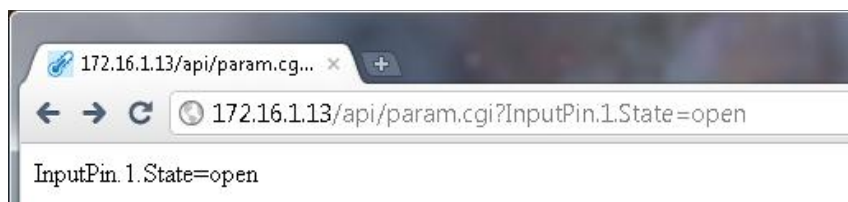
To **set port to CLOSED** send request to the unit:

<http://device IP address/api/param.cgi?InputPin.1.State=close>

To **set port to OPEN** send request to the unit:

<http://device IP address/api/param.cgi?InputPin.1.State=open>

Unit will answer with real state of the input:



If the port is not set to remote mode, units will answer:

404 Non existing page

Multiple port control:

Commands to multiple ports could be sent all in once:

Example: <http://192.168.10.20/api/param.cgi?InputPin.1.State=open&InputPin.2.State=close>



RIM Security

Remote input mode support unit security features. HWg-Juno unit supports Basic authentication. Access to unit is protected with user name and password.

To configure protected access for RIM

- Enter user name and password in units admin interface **HWg-Juno > General setup**
- Reboot the unit to apply the security settings.

All access to unit will now require authentication with user name and password.

Remote input port control HTTP API commands must be used with integrated authentication.

Single port control:

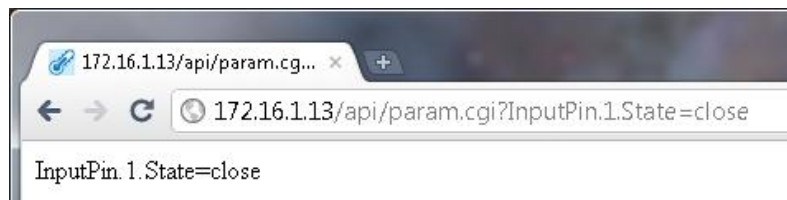
To **set port to CLOSED** send request to the unit:

<http://user name:password@device IP address/api/param.cgi?InputPin.1.State=close>

To **set port to OPEN** send request to the unit:

<http://user name:password@device IP address/api/param.cgi?InputPin.1.State=open>

Unit will answer with real state of the input:



Wrong or missing authentication will provide answer:



Note: Microsoft Internet Explorer does not support integrated authentication from version 8 and newer. For testing and development you have to use Firefox or Google Chrome web browsers.